the short-circuited state by the switch SW2. At this time, the chip enable signal 2 is inputted to the CE input port of the internal ROM 56 and the chip enable signal 1 is inputted to the CE input port of the external ROM 58. The warning message display program 56a, the karaoke video data 56b and the karaoke music data 56c read out of the internal ROM 56, and the karaoke program 58a, the karaoke video data 58b and the karaoke music data 58c read out of the memory cartridge ROM 58 are mapped as shown in Figure 10.

The warning message display program 56a is mapped to an address space that the upper 8 bits indicate "60" - "7F" and the lower 16 bits indicate "FFFF" - "8000", and the waning message display program 56a, the karaoke video data 56b and the karaoke music data 56c are mapped to an address space that the upper 8 bits indicate "E0" - "FF" and the lower 16 bits indicate "FFFF" - "0000". Meanwhile the karaoke program 58a is mapped to an address space that the upper 8 bits indicate "00" - "3F" and the lower 16 bits indicate "FFFF" - "8000", and the karaoke program 58a, the karaoke video data 58b and the karaoke music data 58c are mapped to an address space that the upper 8 bits indicate "80" - "BF" and the lower 16 bits indicate "FFFF" - "0000". Since the high-speed processor 52 starts to access from the upper 8 bits' address of "00", when the power is turned on in a state that the memory cartridge 48 is attached, the karaoke program 58a is first executed.

In this manner, since a mapping state of an address space viewed from the high-speed processor 52 differs depending on whether the memory cartridge 48 is attached or not, each of the programs stored in the main body internal ROM 56 and the memory cartridge ROM 58 can be properly started. If an update program or a modification program for updating or modifying data or programs stored in the main body internal ROM 56 is prepared in the memory cartridge ROM 58, the update program

or the modification program is executed by attaching the memory cartridge 48, it is possible to change an output image or output sound.

In another embodiment, the memory cartridge 48 is attached or inserted into the karaoke device built-in microphone 10 shown in Figure 1 and a ball paddle game device (home game apparatus) 70 shown in Figure 11, and used therein.

First, referring to Figure 11, a description is made on the ball paddle game device 70. The ball paddle game device 70 includes a game console (main body) 72, and the game console 72 is applied with a direct current (DC) power by an AC/DC adaptor or a battery. The game console 72 is further connected to an AV terminal of a television monitor (not shown) by way of an AV cable 74.

The game console 72 has a housing made of a material such as plastic, for example, and is provided with the cartridge connector 46 shown in Figure 4 on a side surface of the housing at a deeper side. The cartridge connector 46 is removably attached with the memory cartridge 48. A power switch 76 is provided on a right side surface of the housing, and a start key 78 and a music selection key 80 are placed on an upper surface of the housing at a deeper side. The start key 78 is operated at a start of a game. The music selection key 80 is to choose any of pieces of music stored or registered in advance in the game console 72 or pieces of music stored in the memory cartridge 48 when playing a game to the music as described later. A front side of the housing of the game console 72 is slightly slanted downward, and a plurality of paddle keys (four as in the embodiment) 82a, 82b, 82c and 82d are placed on the slant with proper intervals.

The ball paddle game device 70 presents a TV game screen shown in Figure 12 on the television monitor. On the game screen, a plurality of ball moving paths (four as in the embodiment) A, B, C, and D are formed. Ball figures 84 (hereinafter may be simply referred to as "ball") move on the path A – D, respectively. In this embodiment, the balls

84 are displayed as if they were falling. Falling of the balls 84 follows a predetermined pattern. For example, the balls drop in sequence in any arbitrary path out of four paths, or the balls drop in two or more paths simultaneously. Paddle figures (hereinafter, may be briefly referred to as "paddle") 86a, 86b, 86c and 86d are displayed in the game screen

5   midway the respective moving paths on a straight horizontal line, for example, so as to receive the falling balls.

When the player selects a music by the music selection key 80 in the ball paddle game device 70, the music is played, and the balls 84 fall to rhythm or tempo of the music. The game player operates paddle keys 82a - 82d as shown in Figure 11, hitting a ball 84

10   skillfully by the paddles 86a - 86d. If the ball is hit by the paddle successfully, the ball 84 is bounced upward by the paddles 86a - 86d and lofted in the embodiment. If the paddle keys 82a - 82d are operated in delayed timing and the ball 84 is unsuccessfully hit by the paddles 86a - 86d, the ball 84 in the embodiment moves down and then vanished in a downward direction of the paddles 86a-86d. In the case of failure, a life is decreased at a

15   life display portion 90 in a game information display portion 88 and one of life figures is gone out. Note that the life means the number of game plays that a game player can try.

As shown in Figure 13, the game console 72 includes a game processor 92. As the game processor 92, the same processor as above-described processor 52 (referred to Figure 2) is used. Accordingly, the game processor 92 includes various processors such

20   as CPU (arithmetic and logical operation processor), graphic processor, sound processor, DMA processor, and etc. In addition, also included are an A/D converter for taking in an analog signal and an input /output control circuit which receives an input signal such as a key operating signal and gives an output signal to an external apparatus.

The CPU executes required operations in response to input signals, and then sends

25   results thereof to other processors. The graphic processor executes a required graphic